CLAIMS

1. A method of controlling removal of photoresist in openings of a photoresist mask, comprising the steps of obtaining in a scanning electron microscope a video signal of a bottom of an opening of a photoresist mask; and comparing values of the video signal in different points of an image which contains the opening to be controlled.

2. A method as defined in claim 1, wherein said comparing includes selecting a portion of a field of view outside of an image of the opening; determining a mean value of the video signal and a mean square amplitude of noise on the selected portion; subdividing the image of the bottom of the opening into fragments; repeating calculations of a mean signal in each fragment; calculating paired differences of mean values of the signal; selecting those paired differences which exceed a threshold; and making a conclusion about a presence or absence of non-removed photoresist with determination of borders of the islands.

3. A method as defined in claim 2, wherein the selecting the portion of the field of view outside of the image of the opening is performed with a size of the portion not less than 10 x 10 pixels.

4. A method as defined in claim 2, wherein determining the mean value of the video signal on the selected portion is performed in accordance with the formula:

$$S_{AVE} = \frac{\sum_{i=1}^{n} S(i)}{n}$$

wherein i is a number of pixel, n is a number of pixels involved in the calculation of the mean signal, and S(i) is an individual value of the video signal.

5. A method as defined in claim 2, wherein the determining the mean square amplitude of noises N is performed in accordance with the formula:

$$N = \frac{1}{\sqrt{n}} \sqrt{\sum_{i=1}^{n} \left[S(i) - S_{AVE} \right]^2}$$

6. A method as defined in claim 2, wherein the subdividing of the image of the bottom of the opening in the fragment is performed with the selection of the fragments sizes m x m, wherein m is 3-10, and a number of pixels in the fragment is m^2.

7. A method as defined in claim 2, wherein the calculating of a mean value of the video signal in the fragment is performed in accordance with the formula:

$$SF(k) = \frac{1}{m^2} \sum_{j=1}^{m^2} S(j)$$

wherein SF(k) is the mean value of the video signal in the fragment with number k, j is a number of pixel within the fragment, and S(j) is a video-signal corresponded to the pixel number j.

8. A method as defined in claim 2, wherein the repeated calculating a mean signal in each fragment is performed until all fragments cover the image of the bottom of the opening.

9. A method as defined in claim 2, making a conclusion about presence of islands of non-removed resist by comparison of the paired differences with the threshold which has a value of an expected fluctuations of background

$$FF = 3\frac{N}{m}$$

10. A method as defined in claim 1; and further comprising the image obtained in the scanning electron microscope obtaining at a

reduced accelerating voltage, in order to increase sensitivity of determination of the non-removed photoresist layer.